

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-82 (Canceled)

83. (Previously Presented) A computer readable medium for storing data for access by an application program, comprising:

a file format defining a structure of a file stored in said computer readable medium, the file format including,

elements stored in the computer readable medium, the elements being variable sized data records arranged in a format that can be interpreted by a computer program,

element chunks stored in the computer readable medium, the element chunks being variable sized and including groups of the elements, the element chunks having a unique name and a fixed header including at least one of a number of elements in the element chunk, a compression scheme, or an encryption scheme for the elements,

a model stored in the computer readable medium, the model including groups of related element chunks and a model header stream, the model header stream including at least one of a model name, units, or a geometric range for the model, and

a root storage stored in the computer readable medium, the root storage including at least one model.

84. (Previously Presented) The computer readable medium of claim 83, further comprising element lists including element chunks classified according to their meaning in the model, the element lists including the unique name for each element chunk in the respective element list.

85. (Previously Presented) The computer readable medium of claim 84, wherein the elements include control elements having no physical representation and graphic elements having a graphical representation.

86. (Previously Presented) The computer readable medium of claim 85, wherein the element lists include a graphic element list listing the graphic elements and a control element list listing the control elements.

87. (Previously Presented) The computer readable medium of claim 83, wherein the element chunks include a fixed number of elements.

88. (Previously Presented) The computer readable medium of claim 83, further comprising:

a plurality of models; and

a model directory stored in the root storage and including a list of the models, the models having a unique name within their respective model directory.

89. (Previously Presented) The computer readable medium of claim 83, wherein the root storage further includes a file header stream, a session information stream, a manifest information stream, or a file properties stream stored therein.

90. (Previously Presented) The computer readable medium of claim 83, further comprising a control model directly stored in the root storage and storing information shared across other models in the root storage.

91. (Previously Presented) The computer readable medium of claim 83, wherein said root storage further comprises a control model storage containing a control model header, a global control element list storage and a global graphic element list storage, wherein said global

control element list storage and said global graphic element list storage contain element chunk including global elements.

92. (Previously Presented) The computer readable medium of claim 91, wherein said global elements contain information relevant for all models in said model directory storage.

93. (Previously Presented) The computer readable medium of claim 86, wherein at least one element chunk in said graphic element list is compressed.

94. (Previously Presented) The computer readable medium of claim 86, wherein at least one element chunk in said control element list is compressed.

95. (Previously Presented) The computer readable medium of claim 86, wherein at least one element chunk in said graphic element list is encrypted.

96. (Previously Presented) The computer readable medium of claim 86, wherein at least one element chunk in said control element list is encrypted.

97. (Previously Presented) The computer readable medium of claim 86, wherein at least one element chunk in said control element list is encrypted and compressed.

98. (Previously Presented) The computer readable medium of claim 86, wherein at least one element chunk in said graphic element list is encrypted and compressed.

99. (Previously Presented) A computer program product comprising a computer readable medium having a computer program logic stored therein, the computer program logic comprising:

means for enabling said computer system to allocate elements having a variable size to element chunks, the element chunks being variable sized and including groups of the elements, the element chunks having a unique name and a fixed header including at least one of a number of

elements in the element chunk, a compression scheme, or an encryption scheme for the elements;

means for enabling said computing unit to store in the computer readable medium at least one model, wherein said at least one model is for grouping related elements, is identifiable by a unique identifier, and comprises a control element list having variable sized element chunks containing control elements, and a graphic element list having variable sized element chunks containing graphic elements; and

means for enabling a computing unit to store a root storage comprising the model in the computer readable medium.

100. (Currently Amended) The computer program product of claim 99, further comprising:

means for compressing each element chunk stream to be stored in said graphic element list storage or said control model list storage in said control model directory;—means for enabling said computer system to store a graphic element list storage and a control element list storage in each control model.

101. (Previously Presented) A CAD design file having a file format and stored on a computer readable medium, the CAD design file comprising:

elements representing items of the CAD design, the elements being variable sized data records arranged in a format that can be interpreted by a computer program,

element chunks including groups of the elements, the element chunks having a unique name and a fixed header including at least one of a number of elements in the element chunk, a compression scheme, or an encryption scheme for the elements, the element chunks having a variable size, the groups of elements including control elements having no physical representation and graphic elements having a graphical representation,

a model, the model including groups of related element chunks and a model header stream, the model header stream including at least one of a model name, units, or a geometric range for the model, and

a root storage including at least one model and a control model storing information shared across other models in the root storage.

102. (New) The computer readable medium of claim 101, further comprising element lists including element chunks classified according to their meaning in the model, the element lists including the unique name for each element chunk in the respective element list.

103. (New) The computer readable medium of claim 102, wherein the elements include control elements having no physical representation and graphic elements having a graphical representation.

104. (New) The computer readable medium of claim 103, wherein the element lists include a graphic element list listing the graphic elements and a control element list listing the control elements.

105. (New) The computer readable medium of claim 101, wherein the element chunks include a fixed number of elements.

106. (New) The computer readable medium of claim 101, further comprising:
a plurality of models; and
a model directory stored in the root storage and including a list of the models, the models having a unique name within their respective model directory.

107. (New) The computer readable medium of claim 101, wherein the root storage further includes a file header stream, a session information stream, a manifest information stream, or a file properties stream stored therein.

108. (New) The computer readable medium of claim 101, further comprising a control model directly stored in the root storage and storing information shared across other models in the root storage.

109. (New) The computer readable medium of claim 101, wherein said root storage further comprises a control model storage containing a control model header, a global control element list storage and a global graphic element list storage, wherein said global control element list storage and said global graphic element list storage contain element chunk including global elements.

110. (New) The computer readable medium of claim 109, wherein said global elements contain information relevant for all models in said model directory storage.

111. (New) The computer readable medium of claim 104, wherein at least one element chunk in said graphic element list is compressed.

112. (New) The computer readable medium of claim 104, wherein at least one element chunk in said control element list is compressed.

113. (New) The computer readable medium of claim 104, wherein at least one element chunk in said graphic element list is encrypted.

114. (New) The computer readable medium of claim 104, wherein at least one element chunk in said control element list is encrypted.

115. (New) The computer readable medium of claim 104, wherein at least one element chunk in said control element list is encrypted and compressed.

116. (New) The computer readable medium of claim 104, wherein at least one element chunk in said graphic element list is encrypted and compressed.